

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (previously presented) An ink cartridge for use with a recording apparatus, comprising:

an ink pack which is filled with ink and is formed into a flattened bag shape from flexible material, wherein the flattened bag shape corresponds to a geometric shape and includes a heat-welded edge;

a case housing the ink pack and constituting an outer shell of the cartridge; and

a contact prevention member which is provided within the ink pack for preventing close contact between interior surfaces of the ink pack, caused due to a reduction of ink in the ink pack, thereby ensuring an ink flow passage,

wherein the contact prevention member is attached to the interior surface of the ink pack and is disposed at a location that is entirely separate from an inner-most edge of the heat welded edge of the ink pack corresponding to the geometric shape.

2. (Original) The ink cartridge according to claim 1, wherein the case is hermetically formed, and air pressure can be applied from a recording apparatus to an interior of the case to pressurize the ink pack when the ink cartridge is loaded to the recording apparatus.

3. (Original) The ink cartridge according to claim 1, wherein the contact prevention member is formed from genuine material.

4. (Original) The ink cartridge according to any one of claims 1 through 3, wherein the ink cartridge is loaded to the recording apparatus so that surfaces of the flattened ink pack are oriented in a vertical direction, and the contact prevention member is located at least partially in a lower position with respect to a direction of gravity.

5. (Original) The ink cartridge according to claim 4, wherein the contact prevention member is formed by a single rod member.

6. (previously presented) An ink cartridge for use with a recording apparatus, comprising:
an ink pack which is filled with ink and is formed into a flattened bag shape from flexible material, wherein the flattened bag shape corresponds to a geometric shape;

a case housing the ink pack and constituting an outer shell of the cartridge; and

a contact prevention member which is provided within the ink pack for preventing close contact between interior surfaces of the ink pack, caused due to a reduction of ink in the ink pack, thereby ensuring an ink flow passage,

wherein the contact prevention member is attached to the interior surface of the ink pack and is disposed at a location that is separated from an outer edge of the ink pack corresponding to the geometric shape,

wherein the case is hermetically formed, and air pressure can be applied from a recording apparatus to an interior of the case to pressurize the ink pack when the ink cartridge is loaded to the recording apparatus,

wherein the ink cartridge is loaded to the recording apparatus so that surfaces of the flattened ink pack are oriented in a vertical direction, and the contact prevention member is located at least partially in a lower position with respect to a direction of gravity,

wherein the contact prevention member is formed by a single rod member, and wherein the contact prevention member formed by the single rod member is fixed on one interior surface of flexible material constituting the ink pack, by heat welding

7. (Original) The ink cartridge according to claim 4, wherein the contact prevention member is formed by a single rod member bent into a substantially rectangular shape, and arranged the rod along four sides of the flattened ink pack.

8. (previously presented) An ink cartridge for use with a recording apparatus, comprising:

an ink pack which is filled with ink and is formed into a flattened bag shape from flexible material and includes a heat-welded edge;

a case housing the ink pack and constituting an outer shell of the cartridge;

wherein the ink cartridge is loaded to the recording apparatus so that surfaces of the flattened ink pack are oriented in a substantially vertical state,

wherein an ink flow passage bulging outwardly of the ink pack is formed from at least one of interior surfaces of the flexible material constituting the ink pack to extend along a gravity direction lower side of the ink pack,

wherein the ink flow passage is disposed at a location that is entirely separate from an inner-most edge of the heat-welded edge of the ink pack; and

an ink outlet plug member provided at a side of the ink pack,

wherein the side of the ink pack is substantially perpendicular to the gravity direction lower side of the ink pack.

9. (previously presented) An ink cartridge for use with a recording apparatus, comprising:

an ink pack which is filled with ink and is formed into a flattened bag shape from flexible material and includes a heat-welded edge;

a case housing the ink pack and constituting an outer shell of the cartridge;

wherein the ink cartridge is loaded to the recording apparatus so that surfaces of the flattened ink pack are oriented in a substantially vertical state,

wherein an ink flow passage bulging outwardly of the ink pack is formed on at least one of interior surfaces of flexible material constituting the ink pack to extend along a gravity direction lower side of the ink pack,

wherein the ink flow passage is formed by press-forming flexible material constituting the ink pack, and

wherein the ink flow passage is disposed at a location that is entirely separate from an inner-most edge of the heat-welded edge of the ink pack; and
an ink outlet plug member provided at a side of the ink pack,
wherein the side of the ink pack is substantially perpendicular to the gravity direction lower side of the ink pack.

10. (CANCELED)

11. (previously presented) The ink cartridge according to claims 8 or 9, wherein the case is formed hermetically, and air pressure can be applied from a recording apparatus to an interior of the case to pressurize the ink pack when the ink cartridge is loaded to the recording apparatus.

12. (previously presented) An ink cartridge for use with a recording apparatus,
comprising:

an ink pack which is filled with ink and is formed into a flattened bag shape from flexible material and includes a heat-welded edge; and

a case housing the ink pack and constituting an outer shell of the cartridge;

wherein the ink cartridge is loaded to the recording apparatus so that surfaces of the flattened ink pack are oriented in a substantially horizontal state,

wherein ink flow passages bulging outwardly of the ink pack are formed from at least one of interior surfaces of the flexible material constituting the ink pack to extend along respective

sides of the ink pack perpendicular to a side in which an ink outlet port is formed, and
wherein each of the ink flow passages is entirely separate from an inner-most edge of the heat-welded edge of the ink pack.

13. (previously presented) An ink cartridge for use with a recording apparatus, comprising:

an ink pack which is filled with ink and is formed into a flattened bag shape from flexible material and includes a heat-welded edge; and

a case housing the ink pack and constituting an outer shell of the cartridge;

wherein the ink cartridge is loaded to the recording apparatus so that surfaces of the flattened ink pack are oriented in a substantially horizontal state,

wherein ink flow passages bulging outwardly of the ink pack are formed on at least one of interior surfaces of flexible material constituting the ink pack to extend along respective sides of the ink pack perpendicular to a side in which an ink outlet port is formed,

wherein the ink flow passages are formed by press-forming flexible material constituting the ink pack, and

wherein each of the ink flow passages is entirely separate from an inner-most edge of the heat-welded edge of the ink pack.

Claims 14 and 15 (CANCELED)

16. (currently amended): A flexible ink pack having opposing interior surfaces defining an ink storage chamber and including a heat-welded rectilinear edge, the flexible ink pack comprising:

a plug member provided to a shorter side of the ink storage chamber; and

a protrusion and/or recess provided to at least one of the interior surfaces of the ink pack, and elongated substantially along a longer side of the ink storage chamber,

wherein the protrusion and/or recess is ~~attached~~provided to the interior surface of the ink storage chamber pack at a location that is entirely separate from an inner-most edge of the heat-welded rectilinear edge of the ink pack, and

wherein the plug member allows ink to flow out of the ink storage chamber.

17. (Original) The flexible ink pack according to claim 16, wherein the protrusion includes a rod member attached to the one interior surface.

18. (previously presented) A flexible ink pack having opposing interior surfaces defining a ink storage chamber and including a heat-welded rectilinear edge, the flexible ink pack comprising:

a plug member provided to a shorter side of the ink storage chamber; and

a protrusion and/or recess provided to at least one of the interior surfaces of the ink pack, and elongated substantially along a longer side of the ink storage chamber and entirely separate from an inner-most edge of the heat-welded rectilinear edge of the ink pack,

wherein the recess is formed as a consequence of plastically deforming a part of a flexible film defining the one interior surface, and

wherein the plug member allows ink to flow out of the ink storage chamber.

19. (Original) The flexible ink pack according to claim 16, wherein the protrusion is elongated linearly along the longer side.

20. (Original) The flexible ink pack according to claim 16, wherein the recess is elongated linearly along the longer side.

21. (Original) The flexible ink pack according to claim 16, wherein the protrusion is substantially rectangular.

22. (Original) The flexible ink pack according to claim 16, wherein the recess is substantially U-shaped.

23. (Original) The flexible ink pack according to claim 16, wherein the protrusion has an inclined portion angled with respect to both the shorter and longer sides.

24. (Original) The flexible ink pack according to claim 16, wherein the recess has an inclined portion angled with respect to both the shorter and longer sides.

25. (Original) The ink cartridge as claimed in claim 8, wherein the ink flow passage is integral with and defined by the at least one of the interior surfaces of the flexible material.

26. (CANCELED)

27. (Original) The ink cartridge as claimed in claim 1, wherein the contact prevention member is entirely located within an inner space of the ink pack.

28. (Original) The ink cartridge as claimed in claim 27, wherein the contact prevention member is discrete from and does not form a portion of an outer surface of the ink pack.

29. (previously presented) An ink cartridge for use with a recording apparatus, comprising:

an ink pack which is filled with ink and is formed into a flattened bag shape from flexible material and including a heat-welded edge;

a case housing the ink pack and constituting an outer shell of the cartridge; and

a contact prevention member which is provided within the ink pack for preventing close contact between interior surfaces of the ink pack, caused due to a reduction of ink in the ink pack, thereby ensuring an ink flow passage,

wherein the contact prevention member is entirely located within an inner space of the

ink pack, such that the contact prevention member is disposed at a location that is entirely separate from an inner-most edge of the heat welded edge of the ink pack.

30. (Original) The ink cartridge as claimed in claim 29, wherein the contact prevention member is discrete from and does not form a portion of an outer surface of the ink pack.

31. (previously presented): An ink cartridge for use with a recording apparatus, comprising:

an ink pack which is filled with ink and is formed into a flattened bag shape from flexible material, wherein the flattened bag shape corresponds to a geometric shape and includes a heat-welded edge;

a case housing the ink pack and constituting an outer shell of the cartridge;

wherein the ink pack has an integral portion for ensuring an ink flow passage when ink in the ink pack is reduced, and

wherein the integral portion of the ink pack is disposed at a location that is entirely separate from an inner-most edge of the heat-welded edge of the ink pack corresponding to the geometric shape; and

an ink outlet plug member provided at a side of the ink pack.

32. (previously presented) The ink cartridge according to claim 1, wherein the contact prevention member has a circular cross-section.

33. (previously presented) An ink cartridge for use with a recording apparatus, comprising:

an ink pack which is filled with ink and is formed into a flattened bag shape from flexible material;

a case housing the ink pack and constituting an outer shell of the cartridge; and

a contact prevention member which is provided within the ink pack for preventing close contact between interior surfaces of the ink pack, caused due to a reduction of ink in the ink pack, thereby ensuring an ink flow passage,

wherein the contact prevention member is entirely located within an inner space of the ink pack,

wherein the contact prevention member is discrete from and does not form a portion of an outer surface of the ink pack.

34. (previously presented): The ink cartridge as claimed in claim 31, wherein the side of the ink pack is substantially perpendicular to the gravity direction lower side of the ink pack.

35. (previously presented): An ink cartridge for use with a recording apparatus, comprising:

an ink pack which is filled with ink and is formed into a flattened bag shape from flexible material;

a case housing the ink pack and constituting an outer shell of the cartridge; and

a contact prevention member which is provided within the ink pack and which is attached to one interior surface of the ink pack and separates the one interior surface from other interior surfaces of the ink pack when the ink pack is filled with ink,

wherein the contact prevention member contacts with the other interior surfaces of the ink pack for preventing close contact between interior surfaces of the ink pack, caused due to a reduction of ink in the ink pack, thereby ensuring an ink flow passage,

wherein the contact prevention member is entirely located within an inner space of the ink pack,

wherein the contact prevention member is discrete from and does not form a portion of an outer surface of the ink pack.